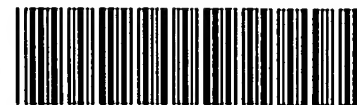


## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 101820, 816A  
Source: IFWO  
Date Processed by STIC: 2-2-05

***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:28

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

```

3 <110> APPLICANT: HOVANESSIAN, Ara
4     BRIAND, Jean-Paul
5     MULLER, Sylviane
6     KRUST, Bernard
7     SVAB, Josette
8     SAID, Elias
10 <120> TITLE OF INVENTION: NOVEL SYNTHETIC PEPTIDE VACCINES FOR HIV: THE CBD
11     EPITOPE AS AN EFFECTIVE IMMUNOGEN TO ELICIT BROADLY
12     NEUTRALIZING ANTIBODIES AGAINST HIV
14 <130> FILE REFERENCE: B5602A - JAZ/KN (I.PASTEUR & CNRS)
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/820,816A
17 <141> CURRENT FILING DATE: 2004-04-09
19 <150> PRIOR APPLICATION NUMBER: EP03290919.4
20 <151> PRIOR FILING DATE: 2003-04-11
22 <160> NUMBER OF SEQ ID NOS: 21
24 <170> SOFTWARE: PatentIn Ver. 2.1
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 9
28 <212> TYPE: PRT
29 <213> ORGANISM: Artificial Sequence
W--> 31 <220> FEATURE:
31 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
32     binding motif in which Xaa is any amino acid
W--> 34 <220> FEATURE:
35 <221> NAME/KEY: VARIANT
36 <222> LOCATION: (2)..(5)
37 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Met,
38     Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
W--> 40 <220> FEATURE:
41 <221> NAME/KEY: VARIANT
42 <222> LOCATION: (7)..(8)
43 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Met,
44     Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
47 <400> SEQUENCE: 1
W--> 48 Trp Xaa Xaa Xaa Xaa Trp Xaa Xaa Trp
49     1             5
53 <210> SEQ ID NO: 2
54 <211> LENGTH: 15
55 <212> TYPE: PRT
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
60     binding domain corresponding to amino acids 619 to

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## RAW SEQUENCE LISTING

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:28

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

```

61      633 of HIV-1
63 <400> SEQUENCE: 2
64 Leu Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
65 1      :      5      10      15
69 <210> SEQ ID NO: 3
70 <211> LENGTH: 15
71 <212> TYPE: PRT
72 <213> ORGANISM: Artificial Sequence
74 <220> FEATURE:
75 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
76      binding domain corresponding to amino acids 662 to
77      676 of HIV-2
79 <400> SEQUENCE: 3
80 Leu Thr Pro Asp Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
81 1      5      10      15
85 <210> SEQ ID NO: 4
86 <211> LENGTH: 30
87 <212> TYPE: PRT
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
92      binding domain corresponding to amino acids 604 to
93      633 of HIV-1
95 <400> SEQUENCE: 4
96 Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu
97 1      5      10      15
99 Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
100      20      25      30
104 <210> SEQ ID NO: 5
105 <211> LENGTH: 26
106 <212> TYPE: PRT
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
112      binding domain corresponding to amino acids 651 to
113      676 of HIV-1
115 <400> SEQUENCE: 5
116 Cys His Thr Thr Val Pro Trp Pro Asn Asp Ser Leu Thr Pro Asp Trp
117 1      5      10      15
119 Asn Asn Met Thr Trp Met Gln Trp Asp Lys
120      20      25
124 <210> SEQ ID NO: 6
125 <211> LENGTH: 26
126 <212> TYPE: PRT
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
131      binding domain corresponding to amino acids 651 to
132      676 of HIV-2

```

## RAW SEQUENCE LISTING

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:28

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

```

136 <400> SEQUENCE: 6
137 Cys His Thr Thr Val Pro Trp Pro Asn Asp Ser Leu Thr Pro Asp Trp
138   1           5           10           15
140 Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
141           20           25
146 <210> SEQ ID NO: 7
147 <211> LENGTH: 30
148 <212> TYPE: PRT
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence: caveolin
153     binding domain corresponding to amino acids 604 to
154     676 of HIV-1
156 <400> SEQUENCE: 7
157 Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu
158   1           5           10           15
160 Glu Gln Ile Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
161           20           25           30
165 <210> SEQ ID NO: 8
166 <211> LENGTH: 9
167 <212> TYPE: PRT
168 <213> ORGANISM: Artificial Sequence
170 <220> FEATURE:
171 <223> OTHER INFORMATION: Description of Artificial Sequence: Caveolin
172     binding motif
174 <400> SEQUENCE: 8
175 Trp Asn Asn Met Thr Trp Met Glu Trp
176   1           5
180 <210> SEQ ID NO: 9
181 <211> LENGTH: 9
182 <212> TYPE: PRT
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Description of Artificial Sequence: Caveolin
187     binding motif
189 <400> SEQUENCE: 9
190 Trp Asn Asn Met Thr Trp Gln Glu Trp
191   1           5
195 <210> SEQ ID NO: 10
196 <211> LENGTH: 20
197 <212> TYPE: PRT
198 <213> ORGANISM: Artificial Sequence
200 <220> FEATURE:
201 <223> OTHER INFORMATION: Description of Artificial Sequence: C-20 peptide
202     scaffolding domain of caveolin from amino acids 82
203     to 101 of caveolin-1
205 <400> SEQUENCE: 10
206 Asp Gly Ile Trp Lys Ala Ser Phe Thr Thr Phe Thr Val Thr Lys Tyr
207   1           5           10           15

```

## RAW SEQUENCE LISTING

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:28

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

```

209 Trp Phe Tyr Arg
210      20
214 <210> SEQ ID NO: 11
215 <211> LENGTH: 17
216 <212> TYPE: PRT
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <223> OTHER INFORMATION: Description of Artificial Sequence: Variant of SEQ
221      ID No. 2 in which Xaa is any amino acid that can be added at the
222      N-terminal or C-terminal of the sequence. The maximum number of these
223      added amino acids (Xaa) can be 40.
225 <220> FEATURE:
226 <221> NAME/KEY: VARIANT
227 <222> LOCATION: (1)
228 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe,
Trp, Tyr, Met,
229      Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
231 <220> FEATURE:
232 <221> NAME/KEY: VARIANT
233 <222> LOCATION: (17)
234 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe,
Trp, Tyr, Met,
235      Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
238 <400> SEQUENCE: 11
W--> 239 Xaa Leu Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
240      1          5          10          15
242 Xaa
247 <210> SEQ ID NO: 12
248 <211> LENGTH: 17
249 <212> TYPE: PRT
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Description of Artificial Sequence: Variant of SEQ
254      ID No. 3 in which Xaa is any amino acid, that can be
255      added at the N-terminal or C-terminal of the sequence. The maximum number
256      of these added amino acids (Xaa) can be 40.
258 <220> FEATURE:
259 <221> NAME/KEY: VARIANT
260 <222> LOCATION: (1)
261 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe,
Trp, Tyr, Met,
262      Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
264 <220> FEATURE:
265 <221> NAME/KEY: VARIANT
266 <222> LOCATION: (17)
267 <223> OTHER INFORMATION: Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe,
Trp, Tyr, Met,
268      Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro
271 <400> SEQUENCE: 12
W--> 272 Xaa Leu Thr Pro Asp Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
273      1          5          10          15
275 Xaa
280 <210> SEQ ID NO: 13

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## RAW SEQUENCE LISTING

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:28

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

```

281 <211> LENGTH: 15
282 <212> TYPE: PRT
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Description of Artificial Sequence: Variant of SEQ
287     ID No. 2
289 <220> FEATURE:
290 <221> NAME/KEY: VARIANT
291 <222> LOCATION: (5)
292 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
294 <220> FEATURE:
295 <221> NAME/KEY: VARIANT
296 <222> LOCATION: (10)
297 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
299 <220> FEATURE:
300 <221> NAME/KEY: VARIANT
301 <222> LOCATION: (13)
302 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
306 <400> SEQUENCE: 13
W--> 307 Leu Glu Gln Ile Xaa Asn Asn Met Thr Xaa Met Gln Xaa Asp Lys
      308   1           5           10           15
312 <210> SEQ ID NO: 14
313 <211> LENGTH: 15
314 <212> TYPE: PRT
315 <213> ORGANISM: Artificial Sequence
317 <220> FEATURE:
318 <223> OTHER INFORMATION: Description of Artificial Sequence: Variant of SEQ
319     ID No. 3
321 <220> FEATURE:
322 <221> NAME/KEY: VARIANT
323 <222> LOCATION: (5)
324 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
326 <220> FEATURE:
327 <221> NAME/KEY: VARIANT
328 <222> LOCATION: (10)
329 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
331 <220> FEATURE:
332 <221> NAME/KEY: VARIANT
333 <222> LOCATION: (13)
334 <223> OTHER INFORMATION: Xaa is Trp, Phe or Tyr.
338 <400> SEQUENCE: 14
W--> 339 Leu Thr Pro Asp Xaa Asn Asn Met Thr Xaa Gln Glu Xaa Glu Arg
      340   1           5           10           15
344 <210> SEQ ID NO: 15
345 <211> LENGTH: 15
346 <212> TYPE: PRT
347 <213> ORGANISM: Artificial Sequence
349 <220> FEATURE:
350 <223> OTHER INFORMATION: Description of Artificial Sequence: Variant of SEQ

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/820,816A

DATE: 02/02/2005  
TIME: 17:09:29

Input Set : A:\Substitute Sequence Listing 02356.0091.txt  
Output Set: N:\CRF4\02022005\J820816A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 2,3,4,5,7,8  
Seq#:11; Xaa Pos. 1,17  
Seq#:12; Xaa Pos. 1,17  
Seq#:13; Xaa Pos. 5,10,13  
Seq#:14; Xaa Pos. 5,10,13  
Seq#:15; Xaa Pos. 7  
Seq#:16; Xaa Pos. 9  
Seq#:17; Xaa Pos. 7  
Seq#:18; Xaa Pos. 9

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:12; Line(s) 255

## VERIFICATION SUMMARY

DATE: 02/02/2005

PATENT APPLICATION: US/10/820,816A

TIME: 17:09:29

Input Set : A:\Substitute Sequence Listing 02356.0091.txt

Output Set: N:\CRF4\02022005\J820816A.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:31 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
L:48 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
M:341 Repeated in SeqNo=11  
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
M:341 Repeated in SeqNo=12  
L:307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:361 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0